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Derwent Title: **Piston for IC engines with direct fuel injection has piston head cavity with collar partially formed by spray coating with a metal alloy for increased strength and temperature resistance**

Original Title: ☒ **DE19902864A1: Kolben für Brennkraftmaschinen mit Direkteinspritzung und Verfahren zu dessen Herstellung**

Assignee: **DAIMLERCHRYSLER AG** Standard company
Other publications from [DAIMLERCHRYSLER AG \(DAIM\)...](#)

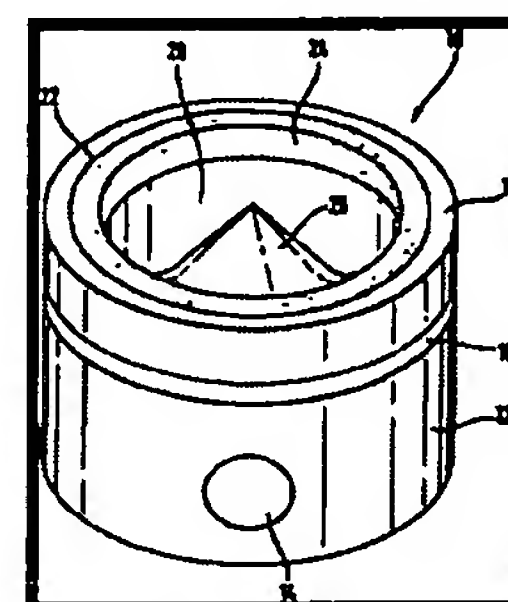
Inventor: **BREITSCHWERDT S; HEIGL R; PFEFFINGER H; ZOLT R;**

Accession/Update: **2000-467036 / 200041**

IPC Code: **F02F 3/14 ; F02F 3/26 ;**

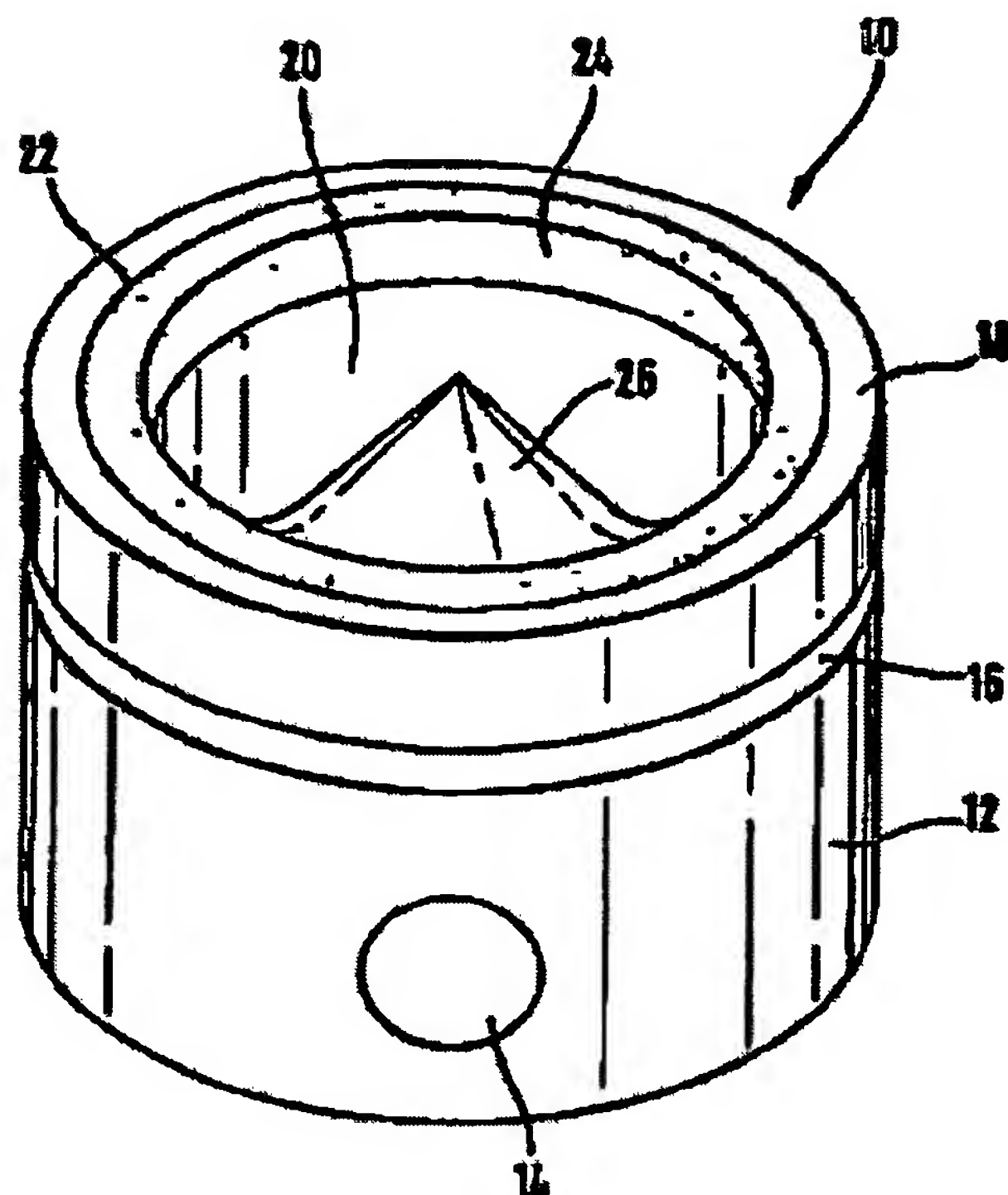
Derwent Classes: **Q52;**

Derwent Abstract: ([DE19902864A](#)) **Novelty** - The piston has a piston head (18) with a cavity (20), which has a collar (24) along its edge (22). The collar is at least partially formed by spray application of an additional material. This may be chosen from a group comprising of copper, cobalt, iron, nickel, aluminum, and aluminum-silicon alloys.
Detailed Description - The main material of the cavity edge is heated to melting temperature to generate a melt bath, the additive is introduced into the melt bath, and the collar is formed in layers by melting-on.
Use - IC engine with direct fuel injection.
Advantage - Piston head cavity has increased strength and temperature resistance, so that the piston can accept higher pressures and temperatures.



Images:

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Description of Drawing(s) - Figure shows piston.
piston head 18, cavity 20, edge 22, collar 24 Dwg.1/2

Family: PDF Patent Pub. Date Derwent Update Pages Language IPC Code
☒ **DE19902864A1** * 2000-06-29 200041 5 German F02F 3/14
 Local appls.: DE1999001002864 Filed:1999-01-25 (99DE-1002864)

INPADOC Legal Status: [Show legal status actions](#)

First Claim: [Show all claims](#)
 1. Kolben für Brennkraftmaschinen mit Direkteinspritzung, mit einer im Kolbenboden (18) ausgebildeten Mulde (20), deren Rand (22) einen Kragen (24) aufweist, **dadurch gekennzeichnet**, daß der Kragen (24) zumindest teilweise mittels Strahlbeschichtung aus einem Zusatzwerkstoff (36) gebildet ist.

Priority Number:	Application Number	Filed	Original Title
	DE1999001002864	1999-01-25	

Title Terms: PISTON IC ENGINE DIRECT FUEL INJECTION PISTON HEAD CAVITY COLLAR FORMING SPRAY COATING METAL ALLOY INCREASE STRENGTH TEMPERATURE RESISTANCE

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